AMENDMENTS TO THE CLAIMS

1. (Currently amended) Telecommunication equipment, comprising:

a switch coupled with a plurality of Ethernet ports for receiving Ethernet ~~framed~~ data frames, each ~~frame of data~~Ethernet data frame including a header information, the switch operable to insert without removing any existing header information a unique port identifier into a predefined header field of ~~frames of the data~~ each Ethernet data frame from each one of the plurality of Ethernet ports to identify the Ethernet port from which ~~the~~ each Ethernet data frame is received; and

a multiplexer coupled to the switch and operable to multiplex the Ethernet ~~framed data~~data frames into a single serial data stream, the multiplexer being operable to multiplex the Ethernet ~~framed~~ data frames from the plurality of Ethernet ports into a single synchronous payload envelope.

2. Cancelled.

3. Cancelled.

4. Cancelled.

5. (Currently amended) The telecommunication equipment, as set forth in claim 1, further comprising a subscriber access multiplexer operable to receive the single serial data stream from the multiplexer, demultiplex the serial data stream into Ethernet data frames from each Ethernet port, and route the Ethernet data frames based on the unique port identifier.

6. (Currently amended) Telecommunication equipment, comprising:

a switch having a plurality of ports for receiving ~~framed~~ data frames from a plurality of ports and switching the data frames to a plurality of ports, each data frame ~~of data~~ including a header information, the switch operable to insert a unique port identifier into a predefined header field of each data frame~~s of data~~ from each port to identify the port from which ~~the~~ each data frame is received; and

a multiplexer coupled to the switch and operable to multiplex the data frames from the plurality of ports into a single serial data stream, the multiplexer being operable to multiplex the data from the plurality of ports into a single synchronous payload envelope;

wherein the data ~~includes data in Ethernet data frames~~ frames are Ethernet data frames and the predefined header field includes a virtual ~~LAN~~local area network (LAN) field.

7. (Currently amended) Telecommunication equipment, comprising:

a switch for receiving ~~framed~~ data frames from a plurality of ports and switching the data frames to a plurality of ports, each ~~frame of~~ data frame including a header information, the switch operable to insert without removing any existing header information a unique port identifier into a predefined header field of ~~frames of the data from each port~~each data frame to identify the port from which each ~~the~~ data frame is received;

a multiplexer coupled to the switch and operable to multiplex the data frames from the plurality of ports into a single serial data stream, the multiplexer being operable to multiplex the data frames from the plurality of ports into a single synchronous payload envelope;

a subscriber access multiplexer operable to receive data from a plurality of sender nodes in a network and operable to insert the unique port identifier based on an internet protocol (IP)~~IP~~ address of the sender node of the data, and multiplex the data into a single serial data stream;

the multiplexer being operable to receive the single serial data stream from the subscriber access multiplexer and demultiplex the data; and

the switch being operable to switch the demultiplexed data based on the unique port identifier to the plurality of ports.

8. (Currently amended) Telecommunication equipment, comprising:

a switch for receiving ~~framed~~ data frames from a plurality of ports and switching the data frames to a plurality of ports, each ~~frame of~~ data frame including a header information, the switch operable to insert without removing any existing header information a unique port identifier into a predefined header field of ~~frames of the data from each port~~each data frame to identify the port from which each ~~the~~ data frame is received;

a multiplexer coupled to the switch and operable to multiplex the data frames from the plurality of ports into a single serial data stream, the multiplexer being operable to multiplex the data frames from the plurality of ports into a single synchronous payload envelope; and

a subscriber access multiplexer operable to receive the single serial data stream from the multiplexer and route ~~the~~ each data frame to a destination network node based on the unique port identifier, a ~~MAC address and IP address in the data~~ media access control (MAC) address, and internet protocol (IP) address in each data frame.

9. (Currently amended) A method comprising:

receiving with a switch ~~framed~~ data frames from a plurality of Ethernet ports, each ~~frame of~~ data frame including header information;

adding a unique port identifier to the header information in ~~the frames of data~~each data frame from each Ethernet port, without removing header information, in order to identify the Ethernet port from which ~~the~~ each data frame came;

multiplexing the data frames from the plurality of Ethernet ports into a single data stream for transmission by a synchronous transmission medium.

10. (Original) The method, as set forth in claim 9, wherein receiving data comprises receiving data from a plurality of Ethernet ports.

11. (Currently amended) The method, as set forth in claim 9, wherein multiplexing the data frames comprises multiplexing the data frames into a single synchronous payload envelope.

12. (Currently amended) A method comprising:

receiving ~~framed~~ data frames at a switch from a plurality of Ethernet ports, each ~~frame of data~~data frame including header information;

adding a unique port identifier to the header information in ~~the frames of~~ each data frame from each Ethernet port to identify the Ethernet port from which ~~the~~ each data frame came;

multiplexing the data frames from the plurality of Ethernet ports into a single data stream for transmission by a synchronous transmission medium;

wherein adding the unique port identifier comprises inserting the unique port identifier into a ~~VID field of a tagged MAC frame of the data~~ virtual local area network identifier (VID) field and each data frame is a tagged media access control (MAC) data frame.

13. (Currently amended) The method, as set forth in claim 9, further comprising converting the single serial data stream into ~~SONET~~ synchronous optical network (SONET) optical signals for transmission.

14. (Currently amended) The method, as set forth in claim 9, further comprising:

receiving the single serial data stream;

demultiplexing the single serial data stream into data frames from each Ethernet port; and

routing the data frames from each Ethernet port based on the unique port identifier.

15. (Currently amended) The method, as set forth in claim 9, further comprising:

receiving data from a plurality of sender nodes in a network;

inserting a unique port identifier based on an IP address of the sender node of the data; and

multiplexing the data into a single serial data stream for transmission;

receiving the transmitted data and demultiplexing the data into data from each sender node; and

switching the demultiplexed data based on the unique port identifier to the plurality of Ethernet ports.

16. (Currently amended) The method, as set forth in claim 9, further comprising receiving the single serial data stream and routing the data frames to a destination network node based on the unique port identifier, a ~~MAC address and IP address in the data~~media access control (MAC address, and an internet protocol (IP) address in each data frame.

17. (Currently amended) A method of multiplexing data from a plurality of Ethernet ports for transmission, comprising:

receiving ~~framed~~ data frames from the plurality of Ethernet ports, each ~~frame of~~ data frame including header information containing at least destination addresses;

adding a unique port identifier to a predetermined header field of ~~the framed~~ each data frame from each of the plurality of Ethernet ports, without removing any header information, to identify the ~~port from which the data~~ Ethernet port from which each data frame came;

multiplexing the data frames from the plurality of Ethernet ports into a single synchronous payload envelope; and

converting the multiplexed data frames into a optical signal for transmission.

18. Cancelled.

19. (Currently amended) A method of multiplexing data from a plurality of ports for transmission, comprising:

receiving ~~framed~~ data frames from the plurality of ports, each ~~frame of data~~ data frame including header information containing at least destination addresses;

adding a unique port identifier to a predetermined header field of ~~the framed~~ each data frame from each port, without removing any header information, to identify the port from which the each data frame came;

multiplexing the data frames from the plurality of ports into a single synchronous payload envelope; and

converting the multiplexed data frames into a optical signal for transmission;

wherein adding the unique port identifier comprises inserting the unique port identifier into a ~~VID field of a tagged MAC frame of the data~~virtual local area network identifier (VID) field and each data frame is a tagged media access control (MAC) data frame.

20. (Currently amended) The method, as set forth in claim 17, further comprising:

receiving the optical signal and converting to a single data stream;

demultiplexing the data stream from each port; and

routing the data frames from each of the Ethernet port[[s]] based on the unique port identifier.

21. (Currently amended) A method of multiplexing data from a plurality of ports for transmission, comprising:

receiving ~~framed~~ data frames from the plurality of ports, each ~~frame of~~ data frame including header information containing at least destination addresses;

adding a unique port identifier to a predetermined header field of ~~the framed data~~ each data frame from each port, without removing any header information, to identify the port from which ~~the~~ each data frame came;

multiplexing the data frames from the plurality of ports into a single synchronous payload envelope;

converting the multiplexed data frames into a optical signal for transmission;

receiving data from a plurality of sender nodes in a network;

inserting a unique port identifier based on an ~~IP~~ internet protocol (IP) address of the sender node of the data;

multiplexing the data into a single serial data stream for transmission;

receiving the transmitted data and demultiplexing the data into data from each sender node; and

switching the demultiplexed data based on the unique port identifier to the plurality of ports.

22. (Currently amended) A method of multiplexing data from a plurality of ports for transmission, comprising:

receiving ~~framed~~ data frames from the plurality of ports, each ~~frame of data~~ data frame including header information containing at least destination addresses;

adding a unique port identifier to a predetermined header field of ~~the framed~~ each data frame from each port, without removing any header information, to identify the port from which ~~the~~ each data frame came;

multiplexing the data frames from the plurality of ports into a single synchronous payload envelope; and

converting the multiplexed data frames into a optical signal for transmission; and

receiving the ~~single serial data stream~~ data stream and routing ~~the~~ each data frame to a destination network node based on the unique port identifier, a ~~MAC address and IP address in the data~~media access control (MAC) address, and internet protocol (IP) address in each data frame.